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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,438	08/23/2006	Tsuneo Nakata	P/2054-140	8750

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EXAMINER	
NGUYEN, DUC M	
ART UNIT	PAPER NUMBER
2618	
MAIL DATE	DELIVERY MODE
11/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,438	NAKATA ET AL.	
	Examiner	Art Unit	
	DUC M. NGUYEN	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *23-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *23-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/23/06, 8/24/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The references listed in the information disclosure statements submitted on 8/23/06 and 8/24/07 have been considered by the examiner (see attached PTO-1449).

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "means for detecting a transmission/reception state of each antenna, and means for performing a hand-over process based upon difference of said transmission/reception state of each of said antennas" as recited in claims 23, 28, 33 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Similarly, "the handoff process" as recited in claims 38, 39, 40 must be shown (i.e, details of a hand-off procedure) or the feature(s) canceled from the claim(s).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such **full, clear, concise, and exact terms** as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims **23-40** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 23, 28, 33, the claims recite a limitation of "means for detecting a transmission/reception **state** (signal strength ?) of each antenna, and means for performing a hand-over process based upon difference of said transmission/reception state of each of said antennas". However, this limitation contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it

pertains, or with which it is most nearly connected, to make and/or use the invention. For examples,

Fig. 4 shows two antennas (101-1, 101-2) and three base stations (102-1, 102-2, 102-3), then "means for detecting a transmission/reception state of each antenna" would comprise

X11 : signal measurement between antenna 101-1 and base station 102-1,

X12 : signal measurement between antenna 101-1 and base station 102-2,

X13 : signal measurement between antenna 101-1 and base station 102-3,

X21 : signal measurement between antenna 101-2 and base station 102-1,

X22 : signal measurement between antenna 101-2 and base station 102-2,

X23 : signal measurement between antenna 101-3 and base station 102-3,

and "means for performing a hand-over process based upon difference of said transmission/reception state of each of said antennas" would comprise several differences (Xik – Xjl), where i=1, 2; j=1, 2; k=1,2, 3; and l=1,2,3; this would lead to the question of which **difference** would be used for performing a hand-over process based upon **difference** of said transmission/reception state of each of said antennas ? and subsequently, how would the hand-off process be done specifically ? Accordingly, an amended specification and a new drawing showing a flow chart that would outline/detail all of the above procedures (i.e, step by step) would be required in order to overcome the 112 rejection.

Claim Rejections - 35 USC 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims **23-40** are rejected under 35 U.S.C. 103(a) as being unpatentable by **Furukawa** et al (US **6,108,548**) in view of **Cvetkovic** et al (US **6,236,844**).

Regarding claims **23-24**, **Furukawa** teaches a method for performing a hand-off in a mobile device comprising two antenna, wherein each antenna would communicate with a plurality of base stations independently (see the whole document), comprising:

a communication means for simultaneously utilizing said two or more antennas, thereby to simultaneously make communication with a plurality of the base stations (see col. 7, lines 58-65, step [S24]);

means for detecting a transmission/reception state of each antenna (see [S20], [S31]-[S33]); and

means for performing a hand-over process based upon difference of said transmission/reception state of each of said antennas (see [S34]-[S47]), which would obviously involve differences of the reception levels.

Here, although **Furukawa** is silent with a relative distant between antennas, one skilled in the art would recognize that the antennas could be spaced apart as far as

possible as disclosed by **Cvetkovic** (see Fig. 1, col. 2, lines 29-43), for minimizing multipath events. Therefore, by simply applying **Furukawa** to the environment in **Cvetkovic** where the mobile device is a vehicle with two antennas, one in the front and the other in the back of the vehicle, **Furukawa** as modified would teach the claimed "a mobile device having wireless antennas in a wireless communication network having a plurality of base stations, characterized in including: two or more antennas installed separately at an extent that the base station of which radio wave intensity becomes maximum differs antenna by antenna in a case where the mobile device has stood still in the vicinity of a boundary of wireless areas" when the vehicle is in a soft handover area.

Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify **Furukawa** for providing a mobile device (i.e, a vehicle) with two far apart antennas as suggested by **Cvetkovic**, thereby providing a method and apparatus as claimed since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

Regarding claims **25-26**, the claims are rejected for the same reason as set forth in claims 23-24 above. In addition, it would have been obvious to one skilled in the art at the time the invention was made to further modify Furukawa for applying Furukawa's teaching to a train or ship as claimed and would work equally well, noting that it has been held that a recitation with respect to the manner in which a claimed apparatus is

intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations *Ex parte Masham* 2 USPQ2d 1647 1987).

Regarding claim **27**, the claim is rejected for the same reason as set forth in claims 23-24 above. In addition, it is clear that **Furukawa** would teach in a case where a set of base stations with which communication is possible via the antenna differ antenna by antenna, making communication with respective separate base stations as claimed (see Furukawa, col. 7, lines 22-36, 58-65, noting for the **diversity** and **independent** features).

Regarding claims **28-40**, the claims are interpreted and rejected for the same reason as set forth in claims 23-27 above (see also Furukawa, Figs. 5-6 and related disclosures).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

See the attached PTO-892.

7. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(571) 273-8300 (for **formal** communications intended for entry)

(571)-273-7893 (for informal or **draft** communications).

Hand-delivered responses should be brought to Customer Service Window,

Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

Any inquiry concerning this communication or communications from the examiner should be directed to Duc M. Nguyen whose telephone number is (571) 272-7893, Monday-Thursday (9:00 AM - 5:00 PM).

Or to Nay Maung (Supervisor) whose telephone number is (571) 272-7882.

/Duc M. Nguyen/

Primary Examiner, Art Unit 2618

Oct 28, 2008